REMARKS

Claims 1-18 are presented for further examination. Claims 1, 3, 8, 14, and 18 have been amended.

In the Office Action mailed April 27, 2004, the Examiner rejected claims 1-18 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,587,560 ("Scott et al.") in view of U.S. Patent No. 6,359,983 ("Krone et al.").

Applicants respectfully disagree with the basis for the rejection and request reconsideration and further examination of the claims.

Discussion of the Present Invention

The disposed embodiment of the invention will now be discussed in comparison to the applied references. Of course, the discussion of the disclosed embodiment and the discussion of the differences between this embodiment and the subject matter described in the applied references does not define the scope or interpretation of any of the claims. Instead, such discussed differences are to merely help the Examiner appreciate important claim distinctions discussed thereafter.

The present invention provides an interface circuit between a transmission line and user equipment that are separated by a galvanic isolation barrier. On the line side of the equipment is an oscillating circuit associated with an element for detecting a voltage threshold on the line side. When the voltage threshold is at a level that the line state is not busy, the oscillating circuit is supplied with power to generate an oscillating signal. The oscillating signal transits the isolation barrier and it is detected by a circuit that measures the amplitude of the oscillating signal independent from a transmission signal to determine the idle or busy state of the line. Ideally, an output signal is generated that is a null signal when the transmission line is busy, is of a low level when the transmission line is idle, and is of an oscillating high level when the transmission line is carrying a bell signal.

Scott et al., U.S. Patent No. 6,587,560 is directed to low voltage circuits powered by a telephone line. Scott et al. teach an interface circuit for a telephone line that includes a

ringer burst circuitry (see Figure 17 and column 27, lines 1-26), and providing a digital signal (see column 27, lines 8-9) that is based on the fact that the tip/ring voltage exceeds a predetermined threshold level. Scott et al. also teach using an oscillating circuit for clock recovery purposes (master and slave oscillators 202, 216) as disclosed in Figure 2 and described at column 8, lines 49-52.

Scott et al. failed to teach or suggest the oscillating circuit on the line side being supplied only when the line state is not busy as detected by a detecting element. Scott et al. further failed to teach or suggest that the amplitude of the oscillating signal provided by the oscillating circuit and having transited through the galvanic isolation barrier is measured on the user equipment side for detecting, independently from the transmission, the idle or busy state of the line.

Krone et al., U.S. Patent No. 6,359,983, disclose a digital isolation system with data scrambling. This reference bears the same application number as Scott et al. and is the identical disclosure. Here, an interface circuit for a telephone line in which, on the equipment side, a voltage controlled oscillator (see element 336 of Figure 17) is provided to "freeze" the output of the isolation side of the isolation barrier (see column 24, lines 29-54). The VCO (336) of Krone et al. provides a local clock signal (LCLK) that is not reconstructed on the basis of a signal received from the line but which locks a timing signal (CLK) received from the equipment side. Because this is the identical disclosure of Scott et al. discussed above, it fails to teach the features discussed above with respect to Scott et al., *i.e.*, supplying the oscillator only when the line state is not busy and detecting and measuring the amplitude of the oscillating signal on the user side independent from a transmission signal for detecting the idle or busy state of the transmission line.

Discussion of Pending Claims

Turning to the claims, claim 1 is directed to an interface circuit that comprises means for forming a galvanic isolation barrier between a transmission line and a user equipment line; and a circuit for detecting the idle or busy state of the line. Claim 1 recites the detecting

circuit as comprising on the line side, an oscillating circuit associated with an element for detecting a voltage threshold that has been exceeded and only supplying the oscillating circuit when the line state is not busy, and on the user equipment side, a circuit for detecting the amplitude of an oscillating signal provided by the oscillating circuit that has transited through the isolation barrier, the amplitude of the oscillating signal measured on the user side for detecting, independently from a transmission, the idle or busy state of the line. As discussed above, nowhere do Krone et al. and Scott et al., taken alone or in any combination thereof, teach or suggest the combination recited in claim 1. More particularly, neither of these references teach or suggest supplying the oscillating circuit when a line state is not busy, and measuring the amplitude of the oscillating signal that has transited through the isolation barrier to detect, independent from a transmission signal on the transmission line, the idle or busy state of the line.

Inasmuch as Scott et al. and Krone et al. are identical disclosures, the combination of these two references is already made and hence these two references do not obviate the claimed invention. Moreover, if an evident combination had to be made between any element of these descriptions, it would have been done in the descriptions themselves.

In view of the foregoing, applicants submit that claim 1 and all claims depending therefrom, *i.e.*, claims 2-7, are clearly allowable.

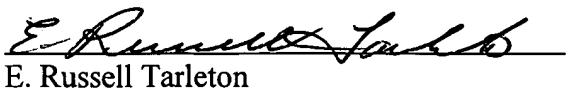
Independent claims 8 and 14 recite limitations similar to claim 1 in that an oscillating output signal is generated only when the transmission line is not busy and measuring the amplitude of the oscillating signal on the user side independent of a transmission signal to detect the state of the line. Applicants submit claims 8 and 14, as well as all claims depending therefrom, are clearly in condition for allowance for these reasons as well as for the reasons why claim 1 is allowable.

In the event the Examiner disagrees, the Examiner is urged to contact applicants' undersigned representative by telephone at (206) 622-4900 in order to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



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